

CLAIMS

1. A method for manufacturing a concrete material from a slurry containing a fresh concrete sludge, the method comprising at least

a grinding step of obtaining a product containing fine particles having a mean particle diameter of 10 μm or less by wet grinding the slurry under a condition of water content of 60 wt.% or more.

2. The manufacturing method according to claim 1, wherein the water content is from 60 to 95 wt.%.

3. The manufacturing method according to claim 1, wherein the fine particles have a mean particle diameter of 1 μm or more but less than 10 μm .

4. The manufacturing method according to claim 1, the method further comprising, prior to the grinding step, a water content adjustment step of adjusting the water content of the slurry by taking out and dewatering part of the slurry and returning the dewatered remaining fraction into the slurry.

5. The manufacturing method according to claim 1, wherein the slurry is obtained by a method comprising

(1) a coarse aggregate separation step of separating a coarse aggregate from a fresh concrete waste;

(2) a fine aggregate separation step of separating a fine aggregate from the slurry obtained in the coarse aggregate separation step; and

(3) a fine aggregate very fine fraction separation step of separating a very fine fraction of the fine aggregate from the slurry obtained in the fine aggregate separation step.

6. A concrete material obtained by the manufacturing method according to claim 1.

7. A grout material containing cement and the concrete material according to claim 6.

8. An apparatus for manufacturing a concrete material from a fresh concrete sludge, comprising:

(1) coarse aggregate separation means for separating a coarse aggregate from a fresh concrete waste;

(2) fine aggregate separation means for separating a fine aggregate from the slurry obtained by performing the coarse aggregate separation treatment;

(3) water content adjustment means for adjusting a water content of the slurry by taking out and dewatering part

of the slurry obtained by implementing the separation treatment of the coarse aggregate and fine aggregate, and returning the dewatered remaining fraction into the slurry; and

(4) grinding means for wet grinding the slurry with the water content thereof adjusted in the water content adjustment means.

9. The manufacturing apparatus according to claim 8, further comprising fine aggregate very fine fraction separation means for separating a very fine fraction of the fine aggregate from the slurry obtained in the fine aggregate separation means.